REMARKS

I. Introduction

In response to the Office Action dated September 26, 2002, claims 4, 12 and 14 have been cancelled, claims 1-3, 6-11 and 13 have been amended, and new claims 15-22 have been added. Claims 1-3, 5-11, 13 and 15-22 remain in the application. Reconsideration of the application, as amended, is requested.

II. Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for patentability or to distinguish the claims over the prior art. The amendments do not narrow the scope of the claims, as they serve merely to improve the grammar of the claim language or, in the case of claim 13, to incorporate the language of the referenced claims and avoid an improper reference to more than one preceding claim. The amendment to claims 6 and 17, to substitute "modifying a site responsible for enzyme activity of integrase" for "modifying the important site for enzyme activity of integrase" likewise improves the grammar and is supported by the specification as originally filed, at page 12, lines 6-10.

The new claims are supported by the application as originally filed. New claims 15 and 16 are supported by originally-filed claims 2 and 3, respectively. New claims 17-22 are supported by originally-filed claims 6-11, respectively. The new claims and amendments, therefore, introduce no new matter. Entry of these amendments is respectfully requested.

III. Restriction Requirement and Traversal

At pages 2-4 of the Office Action, the Examiner required restriction of the application to one of six (6) allegedly distinct inventions:

Group I: Claims 1-3, drawn to a plasmid carrying SIV-derived gag, protease, env and rev gene, classified in 435, subclass 320.1;

Group II: Claim 4, drawn to a plasmid carrying HIV-derived gag, protease, env and rev gene, classified in 435, subclass 320.1;

Group III: Claims 5-11, drawn to a plasmid carrying a SIV-derived pol gene encoding for a reverse trascriptase and integrase, classified in 435, subclass 320.1;

Group IV: Claim 12, drawn to a plasmid carrying a HIV-derived pol gene encoding for a reverse transcriptase and an integrase, classified in 435, subclass 320.1;

Group V: Claim 13, drawn to a DNA vaccine for AIDS prevention and therapy containing plasmids carrying SIV-derived genes, classified in class 514, subclass 44; and

Group VI: Claim 14, drawn to a DNA vaccine for AIDS prevention and therapy containing plasmids carrying HIV-derived genes, classified in class 514, subclass 44.

Applicants elect Group V, namely claim 13, with traverse. Notwithstanding the cancellation of the claims of Groups II, IV and VI, Applicants traverse the restriction requirement for the following reasons.

35 U.S.C. §121 provides that "If two or more independent and distinct inventions are claimed in one application, the Commissioner may require the application to be restricted to one of the inventions." M.P.E.P. §802.01 deviates from the plain meaning of "independent and distinct" by interpreting "and" to mean "or". The Patent Office relies on the absence from the legislative history of anything contrary to this interpretation as support for their position that "and" means "or". Applicants respectfully note that this position is contrary to the rules of statutory construction. Restriction between two dependent inventions is not permissible under the plain meaning of 35 U.S.C. §121.

The Examiner does not assert that the inventions of the claim groups listed above are independent. Rather, the Examiner alleges that the inventions of the claim groups listed above are distinct because they relate to differing plasmids or because they are allegedly related as product and process of use. Applicants assert that restriction is improper because all of the claims relate to the discovery of plasmids suitable for use as a DNA vaccine. None of the claims are method or "process of use" claims as alleged in the Office Action. Applicants further urge the Examiner take

into consideration that the subject matter of each of the claim groups is linked by this common inventive concept.

According to M.P.E.P. §803, there are two criteria for a proper restriction requirement. First, the two inventions must be independent and distinct. In addition, there must be a serious burden on the Examiner if restriction is not required. Even if the first criterion has been met in the present case, which it has not, the second criterion has not been met.

Applicants assert that a search into prior art with regard to the invention of the different groups is so related that separate significant search efforts should not be necessary. For example, a search finding that the vaccine of claim 13 is novel and nonobvious should provide the necessary information for examination of the remaining claims without requiring an additional search effort. This relationship between the claim groups listed above is evidenced by their common classification in class 435, subclass 320.1. Accordingly, there is no serious burden on the Examiner to collectively examine the claim groups listed above. Therefore, restriction is not proper under M.P.E.P. §803.

IV. Conclusion

Consequently, Applicants respectfully request the Examiner reconsider and withdraw the restriction requirement. It is also submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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APPENDIX: VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A plasmid carrying gag, protease, env and rev genes, [all derived from SIV (Simian immunodeficiency virus),] wherein the gag, protease, env and rev genes are derived from SIV (Simian immunodeficiency virus), and wherein the plasmid lacks [but not] tat and nef genes.

2. (Amended) The plasmid according to [the] claim 1, which contains DNA construct of SIV/GE gene described in FIG. 1.

3. (Amended) The plasmid according to [the] claim 1, which is pTV-SIV/GE described in FIG. 2 (Accession NO: KCTC 0702BP).

6. (Amended) The plasmid according to [the] claim 5, wherein the [pol gene encodes the inactive] integrase has been inactivated by modifying [the important] a site responsible for enzyme activity of integrase.

7. (Amended) The plasmid according to [the] claim 6, wherein the [important] site responsible for enzyme activity of integrase is [the base] at positions 5130-5135, and wherein the bases at positions 5130-5132 [is] are deleted, and the bases at positions 5133-5135 [is] are substituted by a codon for serine.

8. (Amended) The plasmid according to [the] claim 5, wherein the 5'-end of pol gene is fused to signal sequence of a secretion protein.

9. (Amended) The plasmid according to [the] claim 8, wherein the secretion protein is glycoprotein D (gD) of [hepes] herpes simplex virus (HSV).

10. (Amended) The plasmid according to [the] claim 5, [which contains] wherein the SIV-derived pol gene comprises a DNA construct of [a] the SIV/pol gene described in FIG. 1.

11. (Amended) The plasmid according to [the] claim 5, [which] wherein the SIV-derived pol gene is pTV-SIV/pol described in FIG. 2 ([Acession] Accession NO: KCTC 0703BP).

13. (Amended) A DNA vaccine for [AIDS] prevention [and therapy] and/or treatment of AIDS comprising: [containing the plasmid of the claim 1 and the plasmid of the claim 5]

a first plasmid carrying gag, dpol, env and rev gene, wherein the gag, dpol, env and rev genes are derived from SIV (Simian immunodeficiency virus), and wherein the first plasmid lacks tat and nef genes; and/or

a second plasmid carrying a SIV-derived pol gene encoding for a reverse transcriptase and an integrase.

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